MEMORANDUM

To: Mike Gordon, U.S EPA
CC: Brian Klein, CPP; Kathleen Cox, U.S. EPA
From: Ian Donaldson, Trinity Consultants
Date: July 20, 2012
RE: Conversion Factors for PAL Permits

On July 11, 2012, the U.S. Capitol Power Plant (CPP) provided the U.S. Environmental Protection Agency (EPA) with conversion factors to be included in CPP's Plantwide Applicability Limit (PAL) permits.[1] These conversion factors will be used to convert monitoring data, in hours of operation, to fuel consumption for a few smaller emissions units covered by the proposed CPP PAL permits. You requested that we provide a further narrative explanation of the conversion factors. In response, we provide below further documentation of the basis of these conversion factors. We also modify one of the proposed factors, and add a conversion factor for the emergency fire pump.

Coal Car Burner Conversion Factor

CPP proposed a conversion factor for the coal car burners of 54 gallons per hour. This is the fuel consumption rate from manufacturer data. Specifically, the rate listed in this data is 9 gallons per hour per thawing pit, with 6 pits at CPP.

Emergency Generator

For the emergency generator, CPP proposed a conversion factor of 104 gallons per hour. This value was based on unit specific performance data received from the manufacturer and represents the fuel rate at 100% load.

Air Compressor

CPP previously proposed a conversion factor of 5.5 gallons per hour for the air compressor. This value should be corrected to 5.3 gallons per hour as calculated using a rated heat input of 0.74 MMBtu/hr and a high heat value of 140,000 Btu/gal.

Emergency Fire Pump

There was no proposed conversion factor for the emergency fire pump in the July 11, 2012 email. However, a factor will be needed for demonstrating compliance with the greenhouse gas (GHG) PAL. No conversion factor is needed for the particulate matter less than 10 microns (PM_{10}) PAL or the nitrogen dioxide (NO_2) PAL since manufacturer's data for hourly emission rates (i.e., units of lb/hr) will be used. For the GHG PAL, the CPP will utilize a conversion factor of 15 gallons per hour. This value was calculated using the rated heat input of the unit, 2.1 MMBtu/hr, and the high heat value of the fuel, 140,000 Btu/gal.

[1] Email from Ian Donaldson (Trinity Consultants) to Mike Gordon (U.S. EPA Region III), Subject Line: CPP PAL Permits – Conversion Factors.